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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,685

01/24/2006

Jurgen Maul

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SIEMENS CORPORATION  
INTELLECTUAL PROPERTY DEPARTMENT  
170 WOOD AVENUE SOUTH  
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EXAMINER

PHAN, HANH

ART UNIT

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2613

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/565,685	<b>Applicant(s)</b> MAUL ET AL.	
	<b>Examiner</b> Hanh Phan	<b>Art Unit</b> 2613	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 February 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 4-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 02/03/2009.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levy et al (US Patent No. 7,366,423) in view of Hamanaka (US Patent No. 5,500,523).

Regarding claim 4, referring to Figures 5, 6a, 6b, 7a, 7b and 8, Levy et al teaches a modular system, comprising:

a rear panel bus (i.e., a board, Fig. 6a) having:

a plurality of slots (i.e., optical connector housing 33, Fig. 6a) configured to accommodate plug-in modules (i.e., DIMM 31, Fig. 6a);

an optical waveguide (i.e., optical link 51, Fig. 6a) for guiding optical signals, the optical waveguide having a number of breaks relative to a propagation direction of the optical signals, each break assigned to one of the slots (i.e., Figs. 5, 6a and 6b, col. 3, lines 6-67 and col. 4, lines 1-57); and

a plurality of modules (i.e., DIMMs 31, Fig. 6a) plugged into the slots, wherein the optical signals transmitted by an optical emitter (i.e., optical emitter

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62, Fig. 6a) arranged on the respective module (i.e., Figs. 5, 6a and 6b, col. 3, lines 6-67 and col. 4, lines 1-57).

Levy et al differs from claim 4 in that he fails to specifically teach each module including a coupling unit for coupling the optical signals to the respective module each coupling unit comprises first and second optical waveguide parts, one end of the first optical waveguide part has an oblique end face for completely coupling out the optical signals from the optical waveguide, and one end of the second optical waveguide part has an oblique end face for coupling the optical signals into the waveguide in the propagation direction, and a dimension of the breaks is only slightly larger than a dimension of the coupling units relative to the propagation. Hamanaka, from the same field of endeavor likewise teaches an optical interconnect system (Figures 4, 5, 16f and 18). Hamanaka further teaches each module including a coupling unit for coupling the optical signals to the respective module each coupling unit comprises first and second optical waveguide parts, one end of the first optical waveguide part has an oblique end face for completely coupling out the optical signals from the optical waveguide, and one end of the second optical waveguide part has an oblique end face for coupling the optical signals into the waveguide in the propagation direction , and a dimension of the breaks is only slightly larger than a dimension of the coupling units relative to the propagation direction (i.e., Figures 4, 5, 16f and 18, col. 1, lines 15-20, col. 4, lines 53-55, col. 6, lines 3-6, col. 7, lines 48-52, col. 8, lines 12-19, col. 9, lines 15-23 and col.. 14, lines 13-67). Based on this teaching, it

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would have been obvious to one having skill in the art at the time the invention was made to incorporate the each module including a coupling unit for coupling the optical signals to the respective module each coupling unit comprises first and second optical waveguide parts, one end of the first optical waveguide part has an oblique end face for completely coupling out the optical signals from the optical waveguide, and one end of the second optical waveguide part has an oblique end face for coupling the optical signals into the waveguide in the propagation direction, and the dimension of the breaks is only slightly larger than the dimension of the coupling units relative to the propagation direction as taught by Hamanaka in the system of Levy et al. One of ordinary skill in the art would have been motivated to do this since allowing the access port can be configured so that cards can be added or taken away without interrupting the signal flow on the interconnect.

Regarding claim 5, the combination of Levy et al and Hamanaka teaches wherein the dimension of the breaks essentially equals the dimension of the coupling units relative to the propagation direction (i.e., Figs. 6a and 6b of Levy et al and Figs. 4, 5, 16f and 18 of Hamanaka).

Regarding claim 6, the combination of Levy et al and Hamanaka teaches further comprising attenuating elements configured to be inserted into the breaks, wherein a dimension of the attenuating elements is slightly smaller than the dimension of the breaks, and the attenuating elements have a specific attenuation for the optical signals (i.e., Figures 6a, 6b, 7a and 7b of Levy et al).

Regarding claim 7, the combination of Levy et al and Hamanaka teaches wherein the dimension of the attenuating elements essentially equals the dimension of the breaks (i.e., Figures 6a, 6b, 7a and 7b of Levy et al, and Figs. 5 16f and 18 of Hamanaka).

Regarding claim 8, the combination of Levy et al and Hamanaka teaches wherein the modular system is an automation system, one of the inserted modules is configured as a master module for the remaining modules (i.e., Figs. 5, 6a and 6b of Levy et al, col. 3, lines 6-67 and col. 4, lines 1-57).

Regarding claim 9, the combination of Levy et al and Hamanaka teaches wherein the master module is configured for communication and to check via the optical waveguide if a valid address has been assigned to the remaining modules (i.e., Figs. 5, 6a and 6b of Levy et al, col. 3, lines 6-67 and col. 4, lines 1-57).

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 4-9 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye, can be reached on (571)272-3078. The fax phone

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number for the organization where this application or proceeding is assigned is  
(571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

/Hanh Phan/

Primary Examiner, Art Unit 2613